

INTERNATIONAL SEARCH REPORT

International Application No
PCT/FI2004/000373

A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 D21C9/02 D21C9/08 D21C9/153 D21C9/14

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 D21C

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the International search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 97/10379 A (AHLSTROM MACHINERY OY ; QVINTUS HARRI (FI); TERVOLA PEKKA (FI)) 20 March 1997 (1997-03-20) Page 2, paragraph 2 Figures 2-6, 12-14 & EP 0 856 079 A (AHLSTROM MACHINERY OY) 5 August 1998 (1998-08-05) cited in the application	1-4
Y	PERKOLA M: "The drum displacer-a new approach to brownstock washing" TAPPI JOURNAL, vol. 02, February 1989 (1989-02), pages 91-96, XP000027277 Operating principle of the DD washer Figure 1 ----- -/--	1-4

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

* Special categories of cited documents:

A document defining the general state of the art which is not considered to be of particular relevance

E earlier document but published on or after the international filing date

L document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

O document referring to an oral disclosure, use, exhibition or other means

P document published prior to the international filing date but later than the priority date claimed

T later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

X document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

Y document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

Z document member of the same patent family

Date of the actual completion of the International search

29 September 2004

Date of mailing of the international search report

05/10/2004

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PCT/FI2004/000373

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 4 664 749 A (HAAPAMAEKI PERTTI ET AL) 12 May 1987 (1987-05-12) figures 1-3	1-4
Y	US 4 919 158 A (QVINTUS HARRI T ET AL) 24 April 1990 (1990-04-24) abstract	1-4
A	US 4 104 114 A (ROWLANDSON GORDON ET AL) 1 August 1978 (1978-08-01) abstract	1-4
X	US 4 529 479 A (TUOMI ALPO) 16 July 1985 (1985-07-16) figures 1,2 example & FI 67 894 A (RAUMA-REPOLA OY) 22 November 1983 (1983-11-22) cited in the application	1-4
A	US 5 051 195 A (HAAPAMAEKI PERTTI ET AL) 24 September 1991 (1991-09-24) the whole document	1-4
A	WO 92/22702 A (SUNDS DEFIBRATOR PORI OY) 23 December 1992 (1992-12-23) the whole document	1-4

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/FI2004/000373

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
WO 9710379	A	20-03-1997	FI 954259 A	12-03-1997
			AT 199750 T	15-03-2001
			CA 2231551 A1	20-03-1997
			CZ 9800699 A3	12-08-1998
			DE 69612105 D1	19-04-2001
			DE 69612105 T2	02-08-2001
			EP 0856079 A1	05-08-1998
			EP 0853700 A1	22-07-1998
			ES 2156288 T3	16-06-2001
			FI 960438 A	12-03-1997
			FI 972876 A	07-07-1997
			FI 980481 A	07-05-1998
			WO 9710379 A1	20-03-1997
			WO 9710380 A1	20-03-1997
			HU 9900013 A2	28-04-1999
			JP 11512491 T	26-10-1999
			NO 981055 A	07-05-1998
			PL 325524 A1	03-08-1998
			PT 856079 T	29-06-2001
			RU 2162496 C2	27-01-2001
			SK 31998 A3	04-11-1998
			US 6159338 A	12-12-2000
			US 6461473 B1	08-10-2002
			ZA 9607249 A	03-03-1997
			ZA 9607658 A	16-04-1997
EP 0856079	A	05-08-1998	FI 954259 A	12-03-1997
			AT 199750 T	15-03-2001
			CA 2231551 A1	20-03-1997
			DE 69612105 D1	19-04-2001
			DE 69612105 T2	02-08-2001
			EP 0856079 A1	05-08-1998
			FI 980481 A	07-05-1998
			HU 9900013 A2	28-04-1999
			JP 11512491 T	26-10-1999
			NO 981055 A	07-05-1998
			PL 325524 A1	03-08-1998
			SK 31998 A3	04-11-1998
			US 6159338 A	12-12-2000
			CZ 9800699 A3	12-08-1998
			EP 0853700 A1	22-07-1998
			ES 2156288 T3	16-06-2001
			FI 960438 A	12-03-1997
			FI 972876 A	07-07-1997
			WO 9710379 A1	20-03-1997
			WO 9710380 A1	20-03-1997
			PT 856079 T	29-06-2001
			RU 2162496 C2	27-01-2001
			US 6461473 B1	08-10-2002
			ZA 9607249 A	03-03-1997
			ZA 9607658 A	16-04-1997
US 4664749	A	12-05-1987	FI 833247 A	08-07-1984
			AT 388194 B	10-05-1989
			AT 215584 A	15-10-1988
			BR 8403416 A	18-06-1985
			CA 1242915 A1	11-10-1988
			DE 3423701 A1	28-03-1985

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/FI2004/000373

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
US 4664749	A		JP 60139886 A SE 462224 B SE 8403553 A	24-07-1985 21-05-1990 13-03-1985
US 4919158	A	24-04-1990	FI 861167 A AT 63949 T EP 0239312 A1 JP 1656422 C JP 3020516 B JP 63012789 A US 5116423 A	21-09-1987 15-06-1991 30-09-1987 13-04-1992 19-03-1991 20-01-1988 26-05-1992
US 4104114	A	01-08-1978	US 4188260 A	12-02-1980
US 4529479	A	16-07-1985	FI 821811 A AT 382651 B AT 160083 A CA 1204560 A1 DE 3315479 A1 SE 462805 B SE 8302828 A	22-11-1983 25-03-1987 15-08-1986 20-05-1986 24-11-1983 03-09-1990 22-11-1983
FI 67894	A	22-11-1983	FI 821811 A ,B, AT 382651 B AT 160083 A CA 1204560 A1 DE 3315479 A1 SE 462805 B SE 8302828 A US 4529479 A	22-11-1983 25-03-1987 15-08-1986 20-05-1986 24-11-1983 03-09-1990 22-11-1983 16-07-1985
US 5051195	A	24-09-1991	FI 884730 A AT 395182 B AU 620956 B2 AU 4705489 A CA 1319621 C DE 3942724 A1 JP 2154088 A JP 2844478 B2 SE 500957 C2 SE 8903111 A	14-04-1990 12-10-1992 27-02-1992 27-06-1991 29-06-1993 27-06-1991 13-06-1990 06-01-1999 10-10-1994 14-04-1990
WO 9222702	A	23-12-1992	FI 912920 A AU 1897992 A CA 2109573 A1 WO 9222702 A1 JP 3232332 B2 JP 6507945 T US 5421176 A	18-12-1992 12-01-1993 23-12-1992 23-12-1992 26-11-2001 08-09-1994 06-06-1995